C. F. Wilson.,

Spindle Bearing.

No. 113,380. Patented Apr. 4. 1871.

Fig. 1

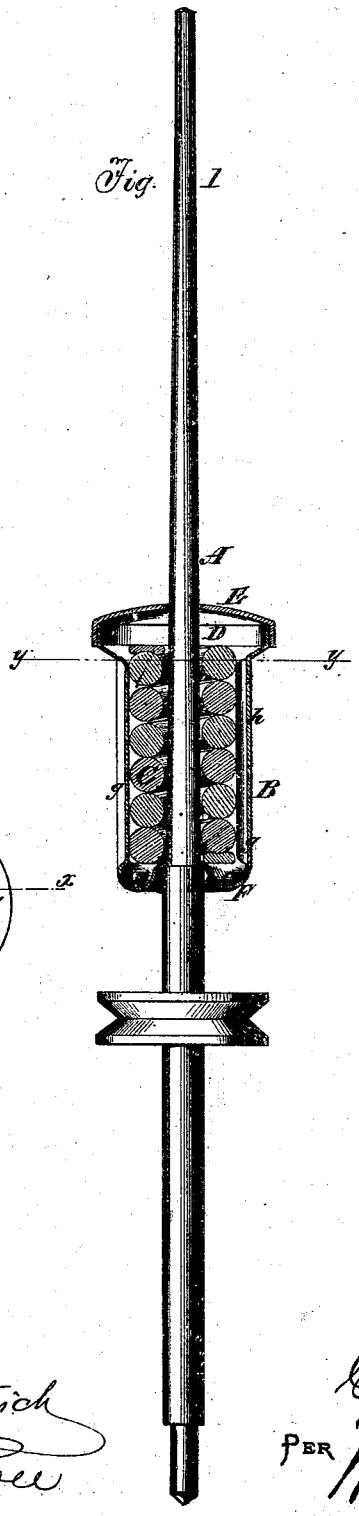
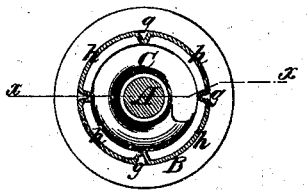


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

CHARLES F. WILSON, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN SPINDLE-BEARINGS.

Specification forming part of Letters Patent No. **113,380**, dated April 4, 1871.

To all whom it may concern:

Be it known that I, CHARLES F. WILSON, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Spindle-Bearings; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification.

This invention relates to a new and useful improvement in bearings or boxes for upright spindles in spinning-frames, in cotton and woolen manufactories, and for other upright journals; and it consists in a cylindrical cup and a spiral-wire box therein, arranged and operating as hereinafter more fully described.

In the accompanying drawing, Figure 1 represents a vertical section of the bearing on the line *x x* of Fig. 2. Fig. 2 is a horizontal section of Fig. 1 on the line *y y*.

Similar letters of reference indicate corresponding parts.

A is the spindle. B is the cup which holds the coil or spindle-bearing C, resting on a shoulder of the spindle. D is the receiving-chamber for the oil above the spiral. This chamber is covered by the cap E.

F is a chamber in the bottom of the cup beneath the spiral. *g* (see Fig. 2) represents ribs on the inside surface of the cup, formed by corrugating the side of the cup. These ribs keep the spiral box in a central position, and cause spaces *h* around the box.

The oil or other lubricating material is placed in the cup D by removing the cap, and naturally runs down into the bottom chamber, F.

The box and cup forming the bearing are stationary, being attached to the rail of the spinning-frame.

The spindle revolves at a high rate of speed within the spiral box, and the oil, by centrifugal force, is driven upward within the spiral to the upper chamber, where it is thrown to the outer boundaries of that chamber, from whence it runs down through the spaces *h* outside of the spiral and returns to the lower chamber. A constant circulation is thus kept up when the spindle is revolving, the upper portion of the spindle-journal being as effectually lubricated as the lower portion.

The result is a great saving of oil, as well as time in oiling, as the oil will last for days without renewal, while the spindle is all the time most perfectly lubricated.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A coiled bearing, C, combined, as described, with a cup, B, ribbed at *g*, to retain it in position.

2. A spindle-journal, A, combined with a spiral bearing in a close stationary box, B, having oil-space D at the top and E at the bottom, with vertical channels *h* on the sides, so that as the oil is forced up from F through the coil and scattered centrifugally upon D, it will trickle back through *h*, and thus keep up a continual circulation until consumed.

CHARLES F. WILSON.

Witnesses:
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